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ABSTRACT OF THE DISCLOSURE

A method and device for local area network (LAN) emulation over an Infiniband (IB) fabric. An IB LAN driver at a first node on an IB fabric receives the port and associated local identifier (LID) of one or more remote peer nodes on the IB fabric. An IEEE 802.3 Ethernet MAC address with one LID imbedded is generated. The imbedded LID is for one or more remote peer nodes. The IB LAN driver sends the Ethernet MAC address to an Address Resolution Protocol (ARP). A logical address of a remote peer node is generated by a network protocol. The logical address is mapped to an Ethernet MAC address. The IB LAN driver sends the Ethernet MAC address onto the IB fabric to the one or more remote peer nodes. The remote peer nodes appear to reside on an Ethernet network to the network protocol.